DOCUMENT RESUME

ED 317 120 HE 023 330

AUTHOR Kidwell, Clara Sue; LaPidus, Jules B.
TITLE Graduate School and You: A Guide for Prospective Graduate Students.
INSTITUTION Council of Graduate Schools in the U.S., Washington, D.C.
PUB DATE 89
NOTE 41p.; Photographs will not reproduce well.
AVAILABLE FROM Council of Graduate Schools, One Dupont Circle, N.W., Suite 430, Washington, DC 20036-1173 ($2.50).
PUB TYPE Guides - Non-Classroom Use (055)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *College Applicants; College Choice; College Preparation; Doctoral Programs; *Graduate Study; Higher Education; Masters Programs; *Student Financial Aid

ABSTRACT

This pamphlet guides the college graduate in determining whether graduate school is an appropriate choice in career planning. Chapter titles include: "Why Graduate School?," "What is Graduate Education?," "Preparation for Graduate School," "Career Options with a Graduate Degree," "Making the Decision," "Financing a Graduate Education," "Choosing a Graduate School," "How to Apply to Graduate School," "The Outcome," "Sources of Information on Graduate Programs and Financial Support," and "Major Sources of Fellowships." A timetable for applying to graduate school and an application check list are included. (JDD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED317120

GRADUATE SCHOOL AND YOU

A Guide for Prospective Graduate Students

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

CGS

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Council of Graduate Schools
Washington, D.C.

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

HE 023 330

GRADUATE SCHOOL AND YOU

A Guide for Prospective Graduate Students

Clara Sue Kidwell, Dean of Graduate Studies
Council of Graduate Schools

Jules B. LaPidus, President
Council of Graduate Schools

Copyright © 1989 by Council of Graduate Schools
One Dupont Circle, N.W., Suite 430
Washington, D.C. 20036-1173
202/223/3791
Printed in the U.S.A.

Table of Contents

Foreword	1
Why Graduate School?	3
What Is Graduate Education?	5
Preparation for Graduate School	7
Career Options with a Graduate Degree	8
Making the Decision	9
Financing a Graduate Education	11
Choosing a Graduate School	14
How to Apply to Graduate School	18
The Outcome	26
Sources of Information on Graduate Programs and Financial Support	27
Major Sources of Fellowships	28
Timetable for Applying to Graduate School	34
Application Check List	35

Tim Turner recently received his Ph.D. in Immunology at the University of California at Berkeley. He is currently a postdoctoral fellow in the School of Medicine, Department of Anatomy at the University of California, San Francisco.

"I contemplated going to graduate school in a quest for knowledge. However, I attended graduate school because of a group of graduate students and the professor I was involved with during a summer undergraduate research program. It was the character and sincerity of these individuals, as well as the positive contribution they were making to increase minority representation in the sciences, that solidified my decision to attend graduate school."

Tim Turner

University of California, San Francisco

Northwestern University

Felicia Cruz is a second year doctoral student in Hispanic Studies at Northwestern University in Evanston, Illinois.

I initially imagined graduate school as a rather general concept—a necessary apprenticeship in the steps toward achieving my ultimate goal: becoming confident and proficient enough to be able to teach literature and to share my ideas with college students. Advanced study as I see it today means much more than a mere "stepping stone" toward some career goal. Graduate school has tapped a resource previously unknown to me: the capacity to think critically, the desire not only to learn, but also to constantly question what is "learned."

Felicia Cruz

Foreword

Graduate Education and You

As you consider what to do with your life, you will need to make choices. One of those choices could be graduate school, especially if you want to pursue a strong interest in a particular field of study. Graduate school, through programs leading to master's and doctoral degrees in hundreds of fields, provides the opportunity to do that. But to take advantage of this opportunity, you will need to know a lot more about what graduate school is and how it can be part of your career plans.

It is important to find a way to get from where you are to where you want to be. Graduate school is one way and, depending on your talents and abilities, it may be a good way for you. This booklet will help you find out.

Jules B. LaPidus
President
Council of Graduate Schools
Summer 1989

Why Graduate School?

If you enjoy reading, problem solving, discovering new facts, and exploring new ideas, you should consider going to graduate school. Your ideas become your major asset. You can decide what you want to do and make it happen. Graduate education gives you a chance to learn more about the things that interest you most and to develop your interests and skills into a full-time career. In that sense, graduate school can give you the opportunity to take control of your life.

A graduate degree can influence how fast and how far you can advance in your career. It can increase your earning power. It can also enhance your job satisfaction, the amount of responsibility you assume, and the freedom you have to make your own decisions rather than simply following someone else's directions.

A graduate degree can also give you greater flexibility to change careers. By earning the degree, you demonstrate your ability to master complex topics and carry out projects on your own initiative. These qualities are attractive to employers, and they may make it possible for you to find jobs in areas other than those you have specifically studied.

In many fields, especially in technology, teaching, and business, the bachelor's degree is an entry level degree. As more people go to college, the bachelor's degree becomes what the high school diploma used to be. You must have it to get a good job. The higher level positions and the decision-making power go to people who have gone beyond the bachelor's level.

If financing a graduate degree is a problem, consider that many graduate students cover part of their costs with grants or fellowships, or earn money through part-time teaching or research. If you must borrow money, it becomes an investment in your future income level. As you move up the educational ladder, the salary you can command moves up as well. In 1987, the average salary difference between bachelor's degree holders and master's degree holders was

about $400 a month. If a difference of a few hundred dollars a month in salary doesn't sound like much, consider that the difference is per month over your entire future career. It can be substantial.

IF YOU HAVEN'T THOUGHT ABOUT GRADUATE SCHOOL, OR THOUGHT IT WASN'T POSSIBLE . . .

This booklet is intended to give you some basic information about various kinds of graduate education, how a graduate degree can benefit you, and how to pay for it.

Geoffrey Edwards is a third-year doctoral student in Theatre and Drama at Northwestern University. His research deals with characterization in operas based on plays of Victor Hugo.

"At the completion of my undergraduate studies, I was eager to build on my long-standing interest in music, dramatic literature, and theatrical performance by exploring the interrelationship of opera and drama. Graduate school, then, was essential to my development as both a scholar and director. Through my course work, research, and production experience, I have been able to enrich the intellectual perspectives and to refine the practical skills needed to make a meaningful contribution to the field of theatre and drama."

Geoffrey Edwards

Northwestern University

hat Is Graduate Education?

A graduate program involves specialized knowledge and concentrated study in one area. In this respect it differs from undergraduate study, which introduces you to a wide range of subjects, even though you major in one, and gives you certain general intellectual skills—reading critically, writing clearly, arguing persuasively.

A graduate program is generally more focussed on a specific area of interest and acquiring specialized skills to practice a profession or do advanced research. However, it does not merely entail an additional number of courses. It requires active participation in research, and/or internships to practice professional skills.

There are two major kinds of graduate degrees, professional degrees and research degrees, and two major levels, master's and doctoral. At the master's level, a professional degree gives you a specific set of skills needed to practice a particular profession. It is generally a final degree. The research master's provides experience in research and scholarship, and it may be a final degree or a step toward the Ph.D.

The professional master's degree may be in education, business, engineering, or some other area of professional activity. It will prepare you for a career in a particular area or will allow you to enhance your skills in your existing career. The master's degree in a research area can do the same, depending on your career aspirations and the area of the degree. It involves less commitment of time and money than does the Ph.D. but can lead to a career with greater responsibility and better pay than you could have with a bachelor's degree alone.

The master's degree usually takes one or two years of study. The professional degree often involves some type of internship or field work. The research degree may involve writing a thesis or taking a comprehensive examination.

At the doctoral level, there are also professional degrees and research degrees. The most common professional degrees

are the M.D. for medical practice or the J.D. for law. These degrees are highly specialized, and more detailed information can be obtained by writing to the Association of American Medical Colleges or the Association of American Law Schools (both located at One Dupont Circle, Washington, D.C. 20036).

For doctoral degrees, this booklet is focussed primarily on the research doctoral degree, the Ph.D. (Doctor of Philosophy). The Ph.D. degree involves training in research, which provides the skills to discover new knowledge. It can prepare you for a wide range of careers. It is the primary credential for college- level teaching. In fact, the word "doctor" comes from the Latin verb *docuere* meaning "to teach," and it originated in the Middle Ages with the establishment of the first universities in Europe.

The doctoral degree typically involves both course work and a major research project. It usually takes four to six years of full-time study to get a Ph.D. or other research doctorate, depending on the field of study. The first two or three years involve classes, seminars and/or directed reading to give you a comprehensive knowledge of an academic field. In the sciences you may also begin independent research projects as part of a laboratory group. This period of study is followed by written or oral examinations that test your knowledge. Successful completion of the exams and formulation of a research project lead to advancement to candidacy. The project involves original research and, depending on the field, should take one to two years of work to complete. Faculty members guide the process of formulating the research project and evaluate the results, but the student carries out the work independently.

Preparation for Graduate School

Jill Harp is a Ph.D. candidate in the Department of Chemistry at the University of Maryland, College Park. Her research involves developing new methods to synthesize 5-membered rings in organic compounds.

"I decided to go to graduate school because I felt that I hadn't learned enough about research as an undergraduate. I didn't want to be just a 'gofer' and do what other people told me to do. I enjoy the opportunity to continue learning."

Jill Harp

A solid bachelor's degree in virtually any field may serve as a prerequisite to the professional degree program (although those in engineering or science fields require mathematics and science courses at the undergraduate level). Often, these programs consider that the quality of a person's experience in the work place after the bachelor's degree is as important as a good academic record. For some programs it is probably wise to stop after you get your bachelor's and spend some time in a job before applying to graduate school. Good work experience, positive recommendations from employers, and academic skills as demonstrated by your grade point average for the bachelor's degree are the best preparation for professional degrees. Scores on standardized tests such as the LSAT (Law School Admissions Test), MCAT (Medical College Admissions Test), or the GMAT (Graduate Management Aptitude Test) may also be important factors for admission into a professional degree program.

University of Maryland, College Park

Admission to a Ph.D. program generally requires a bachelor's degree in a closely related field. You need to have a good grounding in the subject before you begin advanced study. The master's degree can be a way to prepare for the Ph.D., particularly if you want to make a significant change in academic field from your bachelor's degree program. For programs where you are building on an undergraduate major in a field that is changing rapidly (such as computer science or biological science), you should probably go directly to graduate school to keep up with the most current advances in the field.

areer Options with a Graduate Degree

The decision to go to graduate school is a crucial point in a career path. The professional degree is generally very career-specific. People who wish to enter a field may find that the master's degree is the required credential. People who have been working in a professional area can upgrade skills, keep abreast of new knowledge in the field, and enhance their own personal development. The master's degree in an academic area can be an entry point for new and better job opportunities in business, industry, government, and education. In education, for instance, it can open doors to positions as community college faculty, school administrators, or administrative staff members at institutions of higher education.

The Ph.D. is a teaching and research degree, and it provides a wide range of options both in college and university teaching and in corporations, government service, and administration. It gives a person skills for independent thinking and problem solving—a high level of ability to address problems and develop solutions. It requires a high degree of initiative, independence, and self-discipline. For people who are interested in ideas, creative thinking, and problem solving, the Ph.D. offers the greatest challenge and the greatest rewards.

The traditional career for recipients of the Ph.D. is college teaching. But in many fields, particularly in science, people with doctoral degrees find employment with corporations where research and development of new products or services are important, or with government agencies where the skill to analyze large amounts of complex data is essential. Statisticians work for the Census Bureau. Psychologists work for advertising firms. Historians work for museums. Chemists, engineers, physicists and other scientists may work in science-based industries or government-funded research laboratories. The doctoral degree opens a wide variety of career options.

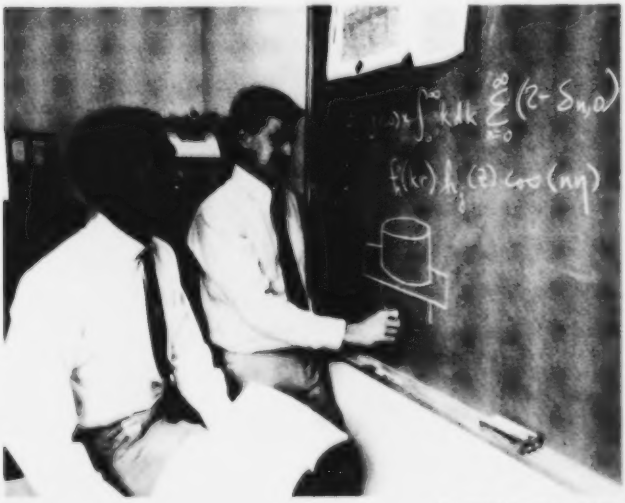
Making the Decision

The first step is to make an honest evaluation of your own strengths, both intellectually and in terms of personality. What do you enjoy doing and why? Are you intellectually curious? Do you enjoy arguing about ideas? Are you introverted? Extroverted? Do you like to teach other people about things? Are you naturally bright, or do you succeed through hard work and attention to detail? Although there is no ideal profile for graduate students, intelligence, initiative and self-discipline are crucial qualities for success. Strong motivation and persistence are very important. The ability to establish good working relationships with other people is also important, since one's career in graduate school depends heavily on following the guidance of one's faculty mentors.

The next step is an evaluation of your career objectives. The professional degree will advance your career in a particular area, especially if you have some work experience related to that profession. It is a relatively short-term investment of time and money that leads generally to increased salary, greater mobility, more responsibility, and greater job security. The master's degree in a research area can do the same, depending on your job situation. The Ph.D. is a serious commitment to a lifetime of teaching and/or research. It involves a significant commitment of time and money, but it ultimately offers the greatest degree of freedom and flexibility to pursue your own interests and shape your own career.

A career in college or university teaching offers the opportunity to explore new ideas and to work with students. It keeps you constantly involved in learning and growing intellectually. Teaching is a very people-intensive activity. It involves the exchange of ideas, and the satisfaction of seeing students come to understand things they didn't understand before. If you have had the experience of the light bulb going on over your head when you have just learned something, you can appreciate the satisfaction of the person who showed you how to turn on the light.

Getting a graduate degree equips you for intellectual entrepreneurship. The term "entrepreneur" is widely used in the world of business. It means someone with the ability to parlay an idea into a useful service or product that has a wide market. In the academic world, you as an entrepreneur can get financial support for ideas and produce new knowledge. If you teach at a research university that offers Ph.D. degrees, you can teach graduate students to do their own research. You can get grants from your own institution, foundations or government agencies to help support your own research and that of your students. In the world of business and government, you have the skills to develop new products or evaluate and change existing policies to get things done in a better way. You can deal with complex problems and come up with solutions. Your work may lead to patents on new inventions, and in government it can produce reports that lead to changes in policies and established practices. Whatever career you may want to pursue, you can do it more effectively with a graduate degree.



National Science Foundation

Financing a Graduate Education

How to pay for graduate school is the major question for most people. There are three basic ways to do it, depending upon the kind of program in which you are interested. They are: fellowships and traineeships, teaching and research assistantships, and loans.

Fellowships or traineeships for graduate study are grants that are generally awarded on the basis of academic merit. They are intended to attract the most highly qualified students into graduate programs. They can be either portable, i.e., offered by an organization for study at any institution of the student's choice, or institutional, i.e., offered by the university or department for study there. Fellowships generally provide payment of tuition and a stipend for living expenses. Institutional fellowships are awarded either by departments or by a central fellowship office in an institution. Most are based solely on academic merit, although there may be some institutional awards that are intended for certain people, i.e., children of veterans or people in a certain field of study. Even restricted fellowships generally involve criteria of academic merit. Institutions that are actively recruiting minority students may have special fellowship programs to attract them.

Some institutions guarantee a certain number of years of financial support for the most promising graduate students. Others will not guarantee support but may give reasonable assurance that teaching or research appointments will be available. Many institutions have special affirmative action programs that encourage members of minority groups to attend graduate school and provide funding for them to do so.

Some of the major portable fellowship programs are listed at the end of this booklet. Since these awards attract applicants from throughout the country, they are highly competitive.

Teaching assistantships usually involve leading a discussion section, supervising a laboratory, grading papers, and meet-

ing with students. The typical appointment involves approximately 20 hours a week. Teaching assistants help an institution teach its undergraduate students, and the fact that these are salaried positions helps the institution support its graduate students.

Research assistants are found especially in science and engineering fields. They are engaged in laboratories to assist faculty in research projects. Advanced students working on their theses or dissertations are often being supported to do their own individual projects. Many institutions also waive or reduce tuition for teaching and research assistants. Although institutions vary widely in the stipends they give, the average pay for a half-time position is around $9 or $10 an hour.

Although fellowships, traineeships, and teaching and research assistantships may be available for master's degree students, they are generally limited at that level. They are more likely to be reserved for doctoral students, who require more time to complete their degree programs.

Federal loans are an important source of support for graduate students. The major federal loan program administered by colleges (formerly the National Direct Student Loan Program, now known as the Perkins Student Loan Program) is need based. The Guaranteed Student Loan Program (now known as the Stafford Loan Program) is also need based. This means that applicants must be certified by their academic institutions as falling within certain federal limitations on income and asset levels. Current federal regulations make virtually all graduate students independent of parental support unless they are claimed as dependents on their parents' federal income tax return. For independent graduate students, parental income is not considered in determining need and eligibility for federal financial aid programs. For people who have been working, salary in the year before they enter graduate school is the basis for determining need. A percentage of that salary has to be considered as an asset available to the student to pay

for graduate school expenses. Students can apply through their institutions for Perkins loans, and to banks for Stafford loans.

Most students in professional degree programs who have financial need will probably have to borrow money. Although federal loans are subsidized and carry lower interest rates than conventional bank loans, they are still debt. However, people often borrow money to invest in order to make money, and the debt you accrue in getting a graduate degree can be considered an investment in your future earning power. In some cases where people have been working and want to go back to school for a graduate degree, employers may help pay tuition.

At the doctoral level, more students work for their educations as teaching or research assistants with faculty members. Some also receive grant money in the form of fellowships or traineeships. Since the Ph.D. has traditionally been a degree for teaching, the practice of teaching is part of the student's education.

The major investments that you make in a graduate degree are time and the income you may forego by being in school. The ultimate reward is the satisfaction of doing what you like to do, having a great deal of freedom, and getting paid for it.

Tony Chiang recently received his Ph.D. in Mechanical Engineering at the University of Maryland, College Park. His research dealt with robotics and automation applied to manufacturing techniques.

"I wanted to be a college professor, and getting a Ph.D. was the way to achieve that goal."

Tony Chiang

University of Maryland, College Park

Choosing a Graduate School

You need to do your research carefully to choose the school that will best suit your needs and talents. There are some 1,200 institutions in the United States that offer graduate degrees, and they are quite different. Many are highly specialized and offer only one kind of degree. Some may offer one or two professional master's degrees, often in education or business administration. Some institutions offer master's degrees only, while others offer doctorates in selected fields. Then there are major research universities that offer master's degrees and doctorates in a wide range of fields.

There are several general guides to graduate programs. They are listed at the end of this booklet. Most college and university libraries, and many public libraries, will have these publications. College libraries and/or counseling centers will generally have collections of college and university catalogs.

You will probably have certain personal preferences regarding the kind of institution you attend. Size and location are two factors that often influence people's decisions about where to go to school. There are advantages to both large and small institutions. A large one may offer a greater variety of sub-fields within a given discipline. A small institution may make you feel that you are getting more personal attention. Location is important if you feel you cannot make a major move because of personal or family concerns.

The most important factor should be how well the graduate program of an institution fits your particular interests, academic background, and goals. Although a university may offer a doctorate in your field, it may not have a program in the branch of that field that interests you. For example, some psychology departments specialize in clinical psychology and offer only a few courses in behavioral psychology, and others do not offer clinical psychology at all. General guides such as those listed in the back of this

booklet will tell you where programs are, and university catalogs will tell you about the emphasis in various departments.

One way to do research on graduate programs is to talk to faculty members at your own undergraduate school about where they did their graduate work and what they know about graduate programs in their fields. Can they recommend faculty at other institutions with whom you should study? Contrary to popular opinion, most faculty members are approachable, particularly if you ask them to talk about themselves and their interests. Getting to know faculty members, and, more important, making sure they get to know you, will be important later on in the application process when you ask for letters of recommendation.

An important point to determine is what the program prerequisites are. For the professional degree, work experience is often as important as academic prerequisites. For the research degree, however, there almost always are specific areas of subject matter and specific skills you have to have mastered at the undergraduate level. Particularly in the sciences, the prerequisites may be very specific.

Another important factor to determine is the selectivity of the program to which you want to apply: how many people apply to a given department or program, and how many are accepted? The greater the application pressure, the more likely that only the most highly qualified applicants will be accepted. This is the point at which to be very honest with yourself concerning your own academic background and intellectual potential. Your background is, of course, a function of the kind of institution from which you have received your bachelor's degree, as well as your own efforts. Some institutions may not offer the range of courses that give you the prerequisites for a very demanding program. Your intellectual potential will determine how strongly you can compete with students from highly competitive undergraduate programs.

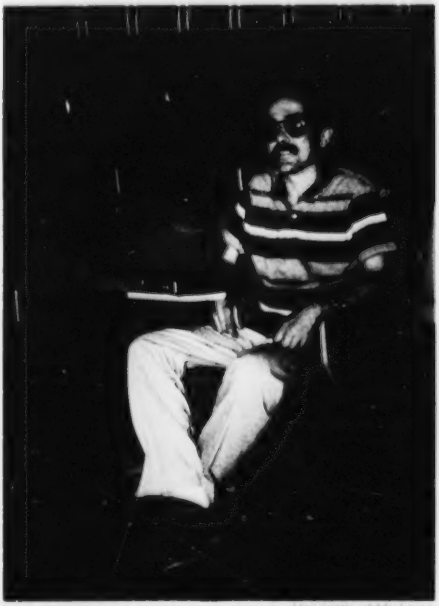
Kevin Clark is a student in the Master's in Public Health program in the School of Public Health, University of Michigan.

"Graduate school will give me, as a disadvantaged person, a greater opportunity for employment. I need more credentials than other people to get the same jobs."

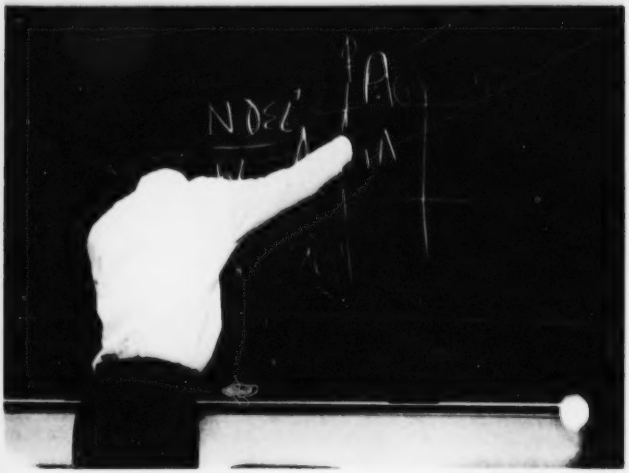
"I'm in graduate school because I want to prove that people who have visual impairments can succeed at school and at employment. Furthermore, my graduate degree will give me the opportunity to help those who have similar handicaps."

"Working on my master's degree gives me the chance to make contacts that may be essential to my career. And, you can't beat Big 10 football for excitement and meeting people."

Kevin Clark



University of Michigan



The Ohio State University

Joggeshwar Das is in the Department of Anthropology, The Ohio State University.

"I have conducted extensive fieldwork on the Sociobiology of Rhesus monkeys in different ecozones in India. As a long-term objective, I look upon my career as a teacher and researcher. My graduate studies have helped me in shaping my career through teaching opportunities and research facilities.

Joggeshwar Das

Finally, keep in mind that, unlike applying to an institution for an undergraduate degree, for a graduate degree you are applying for admission to a department or specific program. You are evaluated and recommended for admission by a group of faculty members, rather than a central admissions office. The reputation of the department and its faculty is the thing to look for.

Graduate schools are interested in recruiting qualified applicants for their programs. To assist in the process and help students locate programs that meet their needs, the Graduate Record Examinations (GRE) Board has developed two services: The Graduate Student Locater Service and the Minority Graduate Student Locater Service. Both are offered at no charge to prospective graduate students, and registration for them does not require registration for GRE tests. One benefit of registering for a search service is that you may hear from institutions you may not have otherwise considered, thus giving you more information about options for your graduate education.

For more information about the Locater Services, consult the *GRE Information Bulletin*, which is available in college counseling centers or by writing to the Educational Testing Service, Princeton, New Jersey 08541.

A special source of information for minority students: Many institutions are trying to increase the numbers of minority students in their programs and send out information to people who sign up for the GRE Board's Minority Locater Service. Blacks, Hispanics, and American Indians and Alaska Natives can get their names on the Locater Service list simply by filling out a form from the *GRE Information Bulletin*. If you are a member of one of these groups, you should sign up. Registering is an easy way to get information from many institutions without writing to each of them separately.

How to Apply to Graduate School

Once you have made the decision to go to graduate school, the next step, of course, is to apply. For graduate school, you apply to a specific program or department, even though you may send your materials to a central office. Your application is evaluated both at the program or department level and at the institutional level.

If at all possible, you should visit campuses where you are interested in studying. Call the appropriate department in advance to see if you can make appointments to visit with faculty members whose work you know or who have been recommended to you by faculty at your own institution. If you are a particularly interesting candidate, or if the institution is actively recruiting students (many are very actively recruiting minority students), the department might even cover part of your travel expenses.

A general rule of thumb is to apply to at least two or three departments that have programs that fit your interests. Don't be afraid to set your goals high. You should apply to at least one highly prestigious and highly competitive research university. You should also apply to a major university with fairly large graduate programs where you feel you have a reasonable chance of being accepted. As insurance, you should probably also apply to an institution near your home that fits both your academic needs and your personal circumstances—budget, family, etc., and where you feel more certain you will be accepted. If you are accepted at all three institutions, so much the better. You will have choices.

The application process can be time consuming, but if you do it thoroughly, the chances are better that you will get accepted to the program of your choice. It can be expensive if you apply to many institutions because most charge an application fee in the range of $20 to $50.

Many institutions have application fee waiver programs for students who show significant financial need. Your under-

graduate financial aid office can furnish a letter or a form if you have received need-based aid.

Special Opportunities for Minorities and Women: Most institutions offer application fee waivers to individuals whom they are actively recruiting under affirmative action programs. If you are a member of a group that has been traditionally underrepresented in graduate programs (Black, Hispanic and American Indian/Alaskan Native, or Asian-American in certain areas such as social sciences or humanities) you should inquire about application fee waivers. Some institutions are also actively recruiting women in sciences and engineering. University catalogs generally have statements of their affirmative action and fee waiver policies and the groups they cover.

Diana Elder is completing her master's degree in Quaternary Studies (an interdisciplinary program including geology, anthropology, biology, and geography) at Northern Arizona University in Flagstaff. Her research is on palynology, the study of geology and pollen to investigate prehistoric climate patterns in southeast Utah.

"Going to graduate school gave me an opportunity to focus on my specific area of interest. I could design my own research program and expand on what I had learned in my undergraduate degree in geology and also use botanical data. My graduate program lets me integrate material from several disciplines."

Diana Elder

Northern Arizona University

The Application

The usual parts of an application are:

- The application form that asks for personal data.
- A statement of purpose—why you want to be admitted to the program for which you are applying.
- Letters of recommendation, which are usually sent directly to the institution by the recommenders.
- Transcripts of college level academic work.
- A report of any standardized test scores (Graduate Record Examination, GMAT, LSAT, Miller Analogies, etc.) required by the program to which you are applying.

Each part of the application is important.

The Application Form

There is always a form that asks for the essential information that the institution will use to file and keep track of your application. It should be filled out clearly and accurately, and typed if possible. Be consistent in spelling out your full, legal name on all forms.

The Statement of Purpose

The Statement of Purpose is an extremely important part of the application because it gives the faculty assessing your application their most significant impression of you as an individual. What are your motivations? Do you write clearly? Do your interests really fit those of the department or school? Can you communicate your ideas effectively? Are there special things about you that set you apart from other applicants and make you particularly desirable as a student?

You should probably write a general statement of purpose as the first step in even considering graduate school. Setting your ideas and goals down on paper should help you clarify your thinking. If you can get things down in no more than three double-spaced typed pages, you probably have a

good idea of what you really want to do. The statement should reflect your own intellectual development. One way to show that is to discuss the points in your life when you made decisions and what influenced them—the decision on a college major, the decision on a career goal, the family members and role models who inspired you.

Once you have a general statement, you can tailor it to specific programs to which you are applying by talking about the reasons you chose the program—how it fits your background and interests. The application materials may give you a specific format for the statement of purpose, or ask you to respond to specific questions, but in all cases, faculty members are interested in your motivation, your intellectual skills, and your suitability for their particular program.

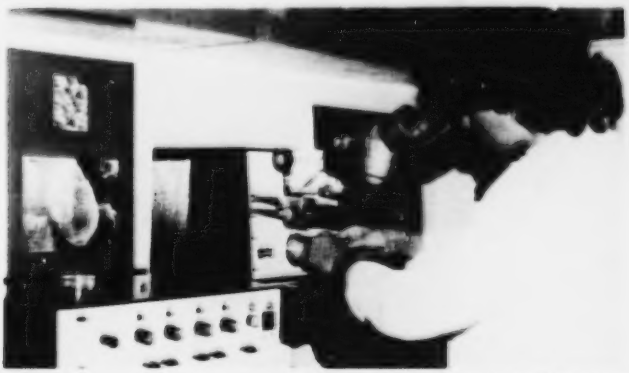
The general statement of purpose is also a good vehicle to use to approach faculty members for recommendations. Make an appointment with a faculty member to discuss your statement and ask for comments before you put it into final form. Also ask for a letter of recommendation after you have had the discussion. You will have valuable feedback on your statement, and you will be demonstrating your seriousness and interest in graduate school.

Letters of Recommendation

Letters from faculty members are very important because your teachers are in the best position to assess your ability to do advanced academic work. Obviously you will want to approach faculty members in whose classes you have done well. You want people who know you personally, hence the importance of talking with your teachers, both as you take their classes and when you seek advice on possible graduate programs. Since initiative and independent thinking are the hallmarks of a good graduate student, you need to display these characteristics at the undergraduate level, and you can do that by asking intelligent questions in class, discussing your exams with faculty members during office hours, and seeking advice about your future career.

A good way to get to know faculty members is by doing research with them. Many institutions have programs that recruit undergraduate students to serve as research assistants. Taking part in such a program has two advantages. First, it promotes good working relationships between students and faculty members, and second, students have the chance to gain valuable experience doing the kind of research that characterizes graduate work.

Check with your campus Counseling Center or Placement Office to see if it has a reference file service. If it does, you can ask faculty members to write general reference letters and send them to that office, and you can then ask the office to send the complete set of letters to graduate schools to which you apply. The reference file is also valuable for potential employers if you don't go to graduate school immediately, and it is particularly valuable if you decide to apply after you have worked and been away from your undergraduate institution for a while. If you haven't compiled a reference file as an undergraduate, and you have been out of school for a while, you should contact faculty members by phone or letter or in person if possible to remind them of who you are and to discuss your plans and seek their advice before asking for a letter.



National Science Foundation

Standardized Test Scores

When you look at the requirements for admission to a graduate program, you should determine whether you need to take a test such as the Graduate Record Examination or a test appropriate to your professional area, such as the LSAT or GMAT. Not all programs require standardized test scores, but many do. For the Graduate Record Examination, it is important to note whether a specific subject test is required in addition to the general examination.

For many students, especially those who have suffered from test anxiety at the undergraduate level, the idea of a nationally administered standardized test is traumatic. But consider the following. First, test scores are only one of several factors that admission committees consider in reviewing your application. The test is not a "make or break" situation. Second, it is possible to study for the test—not to learn the content of the test so much as to practice the test taking skills that will make the experience less traumatic. Working through a number of examples from such tests will show you how the instructions and problems are set up and suggest strategies for approaching each section of the test.

Perhaps the most important, and most intimidating, aspect of standardized tests is that they are timed. You have only a certain amount of time to complete each section. Therefore, as you work your way through examples, set an alarm clock and work against it. Get used to working under pressure. The more familiar you are with the format of the test and the instructions for each section, the less time you will have to spend figuring out how to do things and the more time you can spend actually answering questions. The *GRE Information Bulletin* gives you guidelines for taking the examination and includes a practice test and a list of additional test books that you can order. There are also computer software versions of the tests and professional organizations that offer test-taking workshops.

If standardized test scores are required as part of your application, you should plan to take those tests early in the

fall. October test dates are usually best, since application deadlines for more selective programs generally fall in late December or early January. It usually takes the Educational Testing Service about six weeks to report scores to institutions, and you want to make sure that scores are available before the deadline for your completed application.

Transcripts

You should submit transcripts of all college work that you have undertaken. Even one or two courses in a summer session at another institution should be reported and a transcript sent. Order transcripts early in the fall.

Institutions usually set a minimum undergraduate grade point average for admission to graduate school, generally a 3.0 on a 4.0 scale (a B average, although some departments might admit students whose grades fall below that average). Your undergraduate grade point average is a strong indicator of your ability to do graduate work, and admissions committees consider it carefully. They will look not only at the average but at the quality of the undergraduate institution where you obtained it. They will look closely at the grades you earned in your major subject, and particularly at upper division courses in that subject. They will look for patterns of improvement if you did not start out strongly.

If your grade point average is not outstanding, do not despair. If it is somewhat below a B average, there is still hope. If it is below a B-, be concerned. You may be able to explain unusual circumstances that affected your grades when you write your statement of purpose. You can stress that your grades improved dramatically (if they did). Again, be realistic in assessing what your grades actually show about your academic ability and your own self-discipline and motivation.

Applying for Financial Aid

An application for financial aid will generally come either as part of your application packet or in a separate mailing from

a campus financial aid office. You may have to apply separately for fellowships and for loans. Some institutions have their own forms that you submit directly to them, and some have forms that go to some central processing agency.

READ FINANCIAL AID MATERIALS CAREFULLY.

File documents on time. When aid money is limited, institutions tend to use deadlines as a way of limiting the pool of applicants. Make copies of everything you send in, and you might go so far as to get post office receipts for your mailings if the deadline is a postmark date.

The major forms of financial support have already been described. You should find out as much as you can from the department to which you are applying about their patterns of funding graduate students. Professional degree programs generally are more oriented toward loans, the argument being that you will increase your earning power in a relatively short time and be in a good position to pay back the money. For Ph.D. programs, there is a much stronger commitment to fund students through institutional resources. You should apply for all departmental and institutional resources that are available to you.

National Science Foundation

The Outcome

You have now completed the application process. You have sent in all your forms on time, made sure that your transcripts have been sent, and reminded your recommenders, if necessary, to send their letters. You have survived the necessary standardized tests and had your scores reported to all the institutions to which you are applying.

If you have chosen your programs carefully, if your academic record indicates that you have intellectual potential, if you have convinced your faculty recommenders that you have the intellectual capability, the motivation, and the self-discipline to do advanced work—then you should now wait for the admissions letter(s) to arrive in the mail. When you have made your final decision to enroll, you are ready to embark on the path to a new career and greater freedom to make your own choices and pursue your own interests.

GOOD LUCK!

The Johns Hopkins University

Sources of Information on Graduate Programs

Jones, Lyle V.; Lindzey, Gardner; and Coggeshall, Porter E., editors, *An Assessment of Research-Doctorate Programs in the United States*. Washington: National Academy Press, 1982.

Directory of Graduate Programs, latest edition. Princeton: Educational Testing Service.

Peterson's Annual Guides to Graduate Study, latest edition. Princeton: Peterson's Guides.

Graduate School Guide (Northeast and Midwest), latest edition. New Rochelle, N.Y.

Greene, Howard and Robert Minton, *Beyond the Ivy Wall*, Little, Brown and Company, Boston and Toronto, 1989.

SOURCES OF INFORMATION ON FINANCIAL SUPPORT

A Selected List of Fellowship Opportunities and Aids to Advanced Education. Washington, D.C.: The Publications Office, National Science Foundation, 1988.

Schlachter, Gail Ann, *Directory of Financial Aids for Women 1988–89*. Redwood City, California: Reference Service Press, 1988.

Schlachter, Gail Ann, *Directory of Financial Aids for Minorities*. Redwood City, California: Reference Service Press, 1988.

Grants for Graduate Students 1988–89. Princeton: Peterson's Guides.

Major Sources of Fellowships

The following is a selected list of graduate fellowship opportunities for individuals entering graduate programs. These are portable awards which can be used at any institution to which you may be admitted. They are intended for full-time study leading to the Ph.D. or Sc.D. degree. This list is far from comprehensive. The bibliography on page 24 lists publications that you can consult for more extensive and detailed lists of fellowships and grants. DEADLINES AND STIPENDS MAY VARY SLIGHTLY FROM THOSE LISTED. FULL INFORMATION SHOULD BE OBTAINED EITHER FROM AN OFFICE ON YOUR CAMPUS (SUCH AS A COUNSELING OFFICE) OR BY WRITING DIRECTLY TO THE GRANTING AGENCY.

American Association of University Women
Project RENEW Grants

Purpose: Awarded to women for coursework to prepare for reentry into the workforce, career change, or career advancement.

Eligibility: Must be a U.S. citizen or permanent resident, hold a baccalaureate degree, and have completed their most recent degree at least five years before the July 1 effective date of the award. Coursework must be undertaken at an accredited institution and be a prerequisite for professional employment plans. Preference is given to applicants seeking to enter nontraditional career fields.

Duration: 12 months, beginning July 1.

Amount: $500–5,000

Deadline: January 1

AAUW Educational Foundation
American Association of University Women
2401 Virginia Avenue, N.W.
Washington, D.C. 20037

Mellon Fellowships in the Humanities

Purpose: To encourage students of outstanding promise to prepare for careers in teaching and scholarship.

Eligibility: U.S. or Canadian citizen. Must be nominated by a member of the academic profession.

Duration: Two academic years, with possibility of dissertation year award.

Deadline: For nominations—November 3.
For applications—December 8.

The Woodrow Wilson National Fellowship Foundation
Box 642
Princeton, New Jersey 08542

MARC Predoctoral Fellowship Program

Purpose: To provide support for research training leading to the Ph.D. degree in the biomedical sciences.

Eligibility: U.S. Citizens or Permanent Residents who are American Indians, Blacks, Hispanics, or Pacific Islanders. Must have participated in a MARC Honors Undergraduate Research Training Program. Must be admitted to a graduate program.

Duration: 3 to 5 years.

Stipend: $6,552 plus tuition.

Deadline: January 10

MARC (Minority Access to Research Careers)
National Institute of General Medical Sciences
National Institutes of Health
Bethesda, Maryland 20892

Doctoral Fellowships in Sociology

Purpose: To contribute to the development of sociology by recruiting persons who will add differing orientations and creativity to the field.

Eligibility: American citizens and permanent visa residents, including, but not limited to, persons who are Black, Hispanic (e.g., Chicano, Cuban, Puerto Rican), American Indian, Asian American (e.g., Chinese, Japanese, Korean) and Pacific Islanders (e.g., Hawaiian, Guamanian, Samoan, Filipino) and who document an interest in and commitment to teaching, research, and service careers on the sociological aspects of mental

health issues of ethnic and racial minorities. Open to entering and continuing students.

Duration: One year, with renewal possible for up to two additional years.

Stipend: $6,552. Tuition payment may be partially or fully covered.

Deadline: December 31.

American Sociological Association
Minority Fellowship Program
1722 N Street, N.W.
Washington, D.C. 20036

Office of Naval Research Graduate Fellowships

Purpose: To increase the supply of U.S. citizens trained in disciplines of science and engineering critical to the U.S. Navy.

Eligibility: American citizens who are completing their baccalaureate degrees or who have had no graduate work since completing the baccalaureate.

Duration: Three years.

Stipend: 1st year, $14,750; 2nd year, $15,950; 3rd year, $17,150, plus tuition and fees.

Deadline: January 27.

American Society for Engineering Education
Eleven Dupont Circle, Suite 200
Washington, D.C. 20036

Department of Defense National Defense Science and Engineering Graduate Fellowship Program

Purpose: To increase the supply of U.S. citizens trained in disciplines of science and engineering of military importance. For study and research leading to doctoral degrees in mathematical, physical, biological and engineering sciences.

Eligibility: U.S. citizens. For students at or near the beginning of graduate study.

Duration: Three years.

Stipend: 1st year, $14,000; 2nd year, $15,000; 3rd year, $16,000, plus tuition and fees.

Deadline: March 1

Battelle Columbus Division
Research Triangle Park Office
Graduate Fellowship Program
200 Park Drive
P.O. Box 12297
Research Triangle Park, North Carolina 27709

Howard Hughes Medical Institute Doctoral Fellowships in Biological Sciences

Purpose: To support the education of outstanding prospective investigators to ensure the strength and vigor of the scientific pool for biomedical research.

For study in cell biology and regulation, genetics, immunology, neuroscience, and structural biology.

Eligibility: U.S. citizens or nationals or foreign nationals (i.e., citizens of foreign countries who have applied for U.S. citizenship). For college seniors, college graduates with no post-baccalaureate graduate study in the biological sciences, first year graduate students, or others who have completed a limited amount of post-baccalaureate graduate work.

Duration: Three years.

Stipend: $12,300, plus tuition.

Deadline: November 15

The Fellowship Office
National Research Council
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

National Science Foundation Graduate Research Fellowships

Purpose: To improve the human resource base of science and engineering in the United States.

Eligibility: U.S. citizens or nationals of the United States. For students at or near the beginning of their

graduate study in science or engineering, i.e., applicants must not have completed, by the beginning of the Fall term, more than 20 semester hours, 30 quarter hours or equivalent.

Duration: Three years.

Stipend: $12,300 plus tuition and fees.

Deadline: November 14

The Fellowship Office
National Research Council
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

National Science Foundation Minority Graduate Research Fellowships

Purpose: To improve the human resource base of science and engineering in the United States.

Eligibility: U.S. citizens or nationals of the United States who are American Indian, Black, Hispanic, Native Alaskan (Eskimo or Aleut), or Native Pacific Islander (Polynesian or Micronesian). For students at or near the beginning of their graduate study in science or engineering, i.e., applicants must not have completed, by the beginning of the Fall term, more than 20 semester hours, 30 quarter hours or equivalent.

Stipend: $12,300 plus tuition and fees.

Deadline: November 14

The Fellowship Office
National Research Council
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Ford Foundation Predoctoral and Dissertation Fellowships for Minorities

Purpose: To increase the presence of underrepresented minorities on the nation's college and university faculties.

Eligibility: U.S. citizens or nationals of the United States who are Alaskan Natives (Eskimo or Aleut),

Native American Indians, Black Americans, Mexican American/Chicanos, Native Pacific Islanders (Polynesian or Micronesian), and Puerto Ricans. For study in research-based doctoral programs in the behavioral and social sciences, humanities, engineering, mathematics, physical sciences, and biological sciences, or for interdisciplinary programs comprised of two or more eligible disciplines. For college seniors, first year graduate students or others who have completed a limited amount of graduate work, i.e., applicants must not have completed, by the beginning of the fall term, more than 20 semester hours, 30 quarter hours, or equivalent of graduate level study in fields supported by this program.

Duration: Three years.

Stipend: $10,350.

The Fellowship Office
National Research Council
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

National Graduate Fellows Program (Jacob Javits Fellowships)

Purpose: To assist students of superior ability to pursue full-time graduate study. For study in arts (including architecture, dramatic and creative arts, fine arts, and music); the humanities; the social sciences; or a multidisciplinary program with a focus on one of these fields.

Duration: Up to forty-eight months.

Stipend: Up to $10,000, depending on financial need as determined by academic institution, plus tuition.

Deadline: December 20 (May vary significantly from year to year)

U.S. Department of Education
National Graduate Fellows Program (Jacob Javits Fellowships)
P.O. Box 44367
L'Enfant Plaza Station
Washington, D.C. 20026-4367

CIC Minorities Fellowship Program

Purpose: To increase the representation of American Indians, Black Americans, Mexican-Americans, and Puerto Ricans among Ph.D. recipients in humanities, social sciences, sciences, mathematics, and engineering at The University of Chicago, University of Illinois, Indiana University, University of Iowa, University of Michigan, Michigan State University, University of Minnesota, Northwestern University, Ohio State University, Purdue University, and the University of Wisconsin.

Eligibility: Must be a United States citizen.

Stipend: $8,500, plus tuition

Duration: Four to five years, depending on discipline.

Deadline: January 6

Committee on Institutional Cooperation
CIC Minorities Fellowship Program
Kirkwood Hall 111
Indiana University
Bloomington, Indiana 47405 Telephone: 800-457-4420.

TIMETABLE FOR APPLYING TO GRADUATE SCHOOL

You should begin in the summer before your senior year of college or at least a year before you plan to start graduate school. All times indicated below are approximate. You should study deadlines for specific programs carefully since they may vary significantly depending on the institution to which you apply.

Summer	Write draft statement of purpose. Start browsing through guides to graduate programs and college catalogs.
September	Meet with faculty members to discuss statement and possible programs. Ask for letters of recommendation. Sign up for required standardized tests.
October	Take standardized tests. Request application materials from programs.

November	Order transcripts. Ask if your records office can send a transcript with your fall term grades in time to meet the deadlines of programs to which you are applying.
December	Complete application forms (do a draft on a photocopy of the form first). Give your recommenders the forms to fill out or the addresses to which they should send their letters and copies of your statement of purpose or your response to specific questions asked by the program.
Dec./Jan.	Mail applications. Even if deadlines are later, it is good to get the applications in early.
February	Contact programs about the possibility of visiting. Make trips if possible.
April	If you are applying for need based financial aid programs, you may have to file a copy of your federal income tax return.

APPLICATION CHECKLIST

_____ Statement of Purpose

_____ Letters of Recommendation

_____ Transcripts

_____ Standardized Tests

_____ Applications for Admission

_____ Applications for Financial Aid

_____ Applications for Fellowships

_____ Income Tax Return (if necessary for Financial Aid application)

_____ Other information requested

Council of Graduate Schools
One Dupont Circle, N.W., Suite 430
Washington, D.C. 20036-1173
(202) 223-3791